

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

Claims 1-27 (canceled)

Claim 28 (currently amended): ~~[[The]]~~ A high temperature superconducting cable of
~~claim [[27]], comprising:~~

a tubular support; and

a plurality of superconducting tapes;

wherein the plurality of superconducting tapes are spirally wound onto the tubular
support to form at least an electroinsulated, thermally-insulated, and refrigeratable
superconducting layer,

wherein the superconducting tapes include a superconducting material enclosed in a
metal covering,

wherein the superconducting tapes comprise at least one metal strip coupled to the metal
covering, and

wherein the superconducting tapes have a maximum bearable tensile deformation greater than 3% during manufacture and installation.

Claim 29 (currently amended): ~~[[The]]~~ A high temperature superconducting cable of
~~claim [[27]], comprising:~~

a tubular support; and
a plurality of superconducting tapes;
wherein the plurality of superconducting tapes are spirally wound onto the tubular
support to form at least an electroinsulated, thermally-insulated, and refrigeratable
superconducting layer,
wherein the superconducting tapes include a superconducting material enclosed in a
metal covering,
wherein the superconducting tapes comprise at least one metal strip coupled to the metal
covering, and
wherein the superconducting tapes comprise two metal strips coupled to the metal
covering.

Claim 30 (currently amended): The cable of claim [[27]] 28, wherein the metal covering comprises silver or a silver-based alloy with magnesium, aluminum, nickel, or mixtures thereof.

Claim 31 (currently amended): The cable of claim [[27]] 28, wherein the at least one metal strip is coupled to the metal covering by welding.

Claim 32 (currently amended): The cable of claim [[27]] 28, wherein the at least one metal strip is coupled to the metal covering by brazing.

Claim 33 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein the at least one metal strip is coupled to the metal covering by gluing.

Claim 34 (currently amended): ~~[[The]]~~ A high temperature superconducting cable of
~~claim~~ ~~[[27]]~~, comprising:

a tubular support; and

a plurality of superconducting tapes;

wherein the plurality of superconducting tapes are spirally wound onto the tubular support to form at least an electroinsulated, thermally-insulated, and refrigeratable superconducting layer,

wherein the superconducting tapes include a superconducting material enclosed in a metal covering,

wherein the superconducting tapes comprise at least one metal strip coupled to the metal covering, and

wherein the at least one metal strip is made of non-magnetic stainless steel having a low electric conductivity.

Claim 35 (currently amended): ~~[[The]]~~ A high temperature superconducting cable of
~~claim~~ ~~[[27]]~~, comprising:

a tubular support; and

a plurality of superconducting tapes;

wherein the plurality of superconducting tapes are spirally wound onto the tubular support to form at least an electroinsulated, thermally-insulated, and refrigeratable superconducting layer,

wherein the superconducting tapes include a superconducting material enclosed in a metal covering,

wherein the superconducting tapes comprise at least one metal strip coupled to the metal covering, and

wherein the at least one metal strip is made of bronze.

Claim 36 (currently amended): ~~[[The]]~~ A high temperature superconducting cable of
~~claim [[27]], comprising:~~

a tubular support; and

a plurality of superconducting tapes;

wherein the plurality of superconducting tapes are spirally wound onto the tubular support to form at least an electroinsulated, thermally-insulated, and refrigeratable superconducting layer,

wherein the superconducting tapes include a superconducting material enclosed in a metal covering,

wherein the superconducting tapes comprise at least one metal strip coupled to the metal covering, and

wherein the at least one metal strip is made of aluminum.

Claim 37 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support is made of metal.

Claim 38 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support is made of non-magnetic stainless steel.

Claim 39 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support is made of copper.

Claim 40 (withdrawn—currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support has a continuous structure, either smooth or corrugated.

Claim 41 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support has a spirally-wound metal strip structure.

Claim 42 (withdrawn—currently amended): The cable of claim ~~[[27]]~~ 28, wherein the tubular support has a tile structure.

Claim 43 (currently amended): The cable of claim ~~[[27]]~~ 28, wherein a winding angle of the superconducting tapes onto the tubular support is smaller than 40°.

Claims 44-50 (canceled)

Amendments to the Drawings

The attached sheets of drawings show a cross-sectional, schematic view of a high-temperature, superconducting tape with two metal strips, bands, laminates, or combinations thereof (Fig. 3); and perspective views of tubular supports with various structure types (Figs. 4a, 4b, 4c, and 4d).

Attachments: Three (3) Replacement Sheets (Figs. 3, 4a, 4b, 4c, and 4d)